UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/015,880	12/13/2001	Viktors Berstis	AUS920011011US1	2607

45993	7590	05/16/2005

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EXAMINER
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ART UNIT	PAPER NUMBER
2625	

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>04 February 2005</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-21</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-21</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>04 February 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage

        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

[1]   The response filed on February 04, 2005 has been entered and made of record.

Response to Arguments/Amendments

[2]   Applicant's arguments filed on February 04, 2005 have been fully considered.

Drawings Objections

Summary of Arguments:

Applicant has placed the "Prior Art" legend on figures 3a and 3b; hence the objection should be withdrawn.

Examiner's Response:

Agreed. Examiner thanks the applicant for resolving this issue and withdraws the objection.

35 USC § 101 Rejections

Summary of Arguments:

Claims have been amended to overcome the rejections.

Examiner's Response:

Agreed. Examiner thanks the applicant for resolving this issue and withdraws the rejections.

35 USC § 102 Rejections

Summary of Arguments:

Item A: Claims have been amended to specify features not taught by Resnikoff.

Item B: Claimed uniformly spaced data samples array from non-uniformly spaced data set

would have the same density as the non-uniformly spaced data set. Applicant has added this

limitation via amendment to the respective claims.

Examiner's Response:

Item A: Applicant's arguments are moot in view of the new ground(s) of rejection.

Item B: Applicant's initial claims did not emphasize this limitation; examiner has considered this

argument when examining the amended claims. Applicant's arguments are moot in view of the

new ground(s) of rejection.

35 USC § 103 Rejections

Summary of Arguments:

Tansley does not teach the use of a nonlinear polynomial schema for distribution or positioning

of sensors.

Examiner's Response:

Applicant's arguments are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

[3]   Claims 2, 3, 4, 6, 7, 8, 12, 13, 19 and 20 recite the limitation "predetermined" in claims

have been amended by the applicant to "predictable deterministic". There is insufficient

antecedent basis for this limitation in the claim.

- For examining purposes in this official action examiner will assume the applicants

  intended to use the term "predictable deterministic".

[4]   Claims 9 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply

with the written description requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to reasonably convey to one skilled in the relevant

art that the inventor(s), at the time the application was filed, had possession of the claimed

invention.

- Claims 9 and 14 states, "uniformly spaced data samples represent said image and contain

  approximately the same number of data samples as said first set of non-uniformly spaced

  data samples".

- Applicant states in the response to non-final official action that the abstract and

  paragraphs [0036] and [0037] provide support the claim amendment. However, the

  examiner does not see the support for "approximately the same number of data samples

  as said first set of non-uniformly spaced data samples".

[5]   Claims 9 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

- The term "approximately" is indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
such that the subject matter as a whole would have been obvious at the time the invention was made to a person
having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
manner in which the invention was made.

[6]   Claims 1-4, 6-9, 10, 12-17 and 19-21 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Resnikoff et al. (hereinafter "Resnikoff") [US 4,574,311] in view of Balph

[NPL document, "LFSR counters implement binary polynomial generators"].

Regarding claim 1, Resnikoff discloses the following claim limitations:

A method of producing a sampled image comprising the steps of *[Figure*

6]: providing a plurality of sensor positions in a row arrangement non-uniformly

distributed with varying distances between each adjacent pair of sensor positions

determined according to a first schema and *[Column 5 Lines 45-49, Column 4*

Lines 35-36: Cited reference discloses the Poisson disc process, which is a

schema. This schema is applied to determine the position of sensors for a datum

point. Cited reference states that the invention is not limited to two-dimensional

arrangement, hence would be applicable to the row (one-dimensional)

arrangement.]; selectively sampling an image by sequentially exposing image

portions to said row arrangement according to a second schema such that each

sensor position is sampled in a non-uniform varying spatial manner to obtain a

first set of data samples representing non-uniformly spaced points in said image

[Column 3 Lines 23-27, Column 7 Lines 55-62: Choosing the non-uniform

interval via a probability distribution acts as a schema. Sampling in the non-uniform spatially varying manner is met, because sensors are placed non-uniformly and sampled non-uniformly.].

Resnikoff does not explicitly disclose the schema being "predictable deterministic".

However, in the same field of endeavor Balph discloses a predictable deterministic schema *[Column 1 Paragraph 1, Column 2 Paragraph 1: Cited reference discloses the use of linear feedback shift registers to generate pseudorandom numbers, these numbers are predicatively determined by the polynomial chosen.]*.

It would have been obvious to one with ordinary skill in the art at the time of invention to modify the teachings of Resnikoff with Balph to utilize a predictable deterministic schema for sensor placement. The motivation being that linear feedback shift registers reduce the amount of logic *[Column 1 Paragraph 1]*.

Regarding claim 2, Resnikoff discloses the following claim limitations:

The method as set forth in Claim 1 wherein said first predictable deterministic schema comprises a pseudo-random schema *[Column 4 Lines 22-26]*.

Regarding claim 3, Balph discloses the following claim limitations:

The method as set forth in claim 1 wherein said first predictable deterministic schema comprises a nonlinear polynomial schema *[Column 2 Paragraph 1]*.

Regarding claim 4, Balph discloses the following claim limitations:

The method as set forth in claim 1 further comprising the step of assigning a

reference identifier to said first predictable deterministic schema *[Figure 1:*

Disclosed polynomial X^4+X+1 acts reference identifier to the schema. One can

easily identify the type of distribution being used from the polynomial notation.].

Regarding claim 6, Resnikoff discloses the following claim limitations:

The method as set forth in claim 1 wherein said second predictable deterministic

schema comprises a pseudo-random schema *[Column 3 Lines 23-37: Disclosed*

Poisson sampling is pseudo-random.].

Regarding claim 7, Balph discloses the following claim limitations:

The method as set forth in claim 1 wherein said second predetermined schema

comprises a nonlinear polynomial schema *[Column 2 Paragraph 1]*.

Regarding claim 8, Balph discloses the following claim limitations:

The method as set forth in claim 1 further comprising the step of assigning a

reference identifier to said first predictable deterministic schema *[Figure 1:*

Disclosed polynomial X^4+X+1 acts reference identifier to the schema. One can

easily identify the type of distribution being used from the polynomial notation.].

Regarding claim 9, Resnikoff discloses the following claim limitations:

The method as set forth in claim 1 further comprising the step of interpolating a

set of data samples representing uniformly spaced data samples from said first set

of non-uniformly spaced data samples, wherein said uniformly spaced data

samples represent said image and contain approximately the same number of data

samples as said first set of non-uniformly spaced data samples *[Column 9 Lines*

22-29, Column 11 Lines 3-5: Cited reference discloses interpolation being

performed to create an high resolution image array. This array would have to be

uniform, since it is being displayed on a monitor that is known to have uniform

horizontal and vertical distributions. Number of output data samples can be

controlled by the interpolation operation; hence one can produce output samples

to any resolution desired. One can produce output samples at lower, equal or

higher resolutions to that of the inputted data samples.].

Regarding claim 10, all claimed limitations are set forth and rejected as per discussion for

claim 1.

Regarding claim 12, all claimed limitations are set forth and rejected as per discussion for

claims 2 and 6.

Regarding claim 13, all claimed limitations are set forth and rejected as per discussion for

claims 3 and 7.

Regarding claim 14, all claimed limitations are set forth and rejected as per discussion for claim 9.

Regarding claim 15, all claimed limitations are set forth and rejected as per discussion for claim 9.

Regarding claim 16, all claimed limitations are set forth and rejected as per discussion for claim 2.

Regarding claim 17, all claimed limitations are set forth and rejected as per discussion for claim 3.

Regarding claim 19, all claimed limitations are set forth and rejected as per discussion for claim 6.

Regarding claim 20, all claimed limitations are set forth and rejected as per discussion for claim 7.

Regarding claim 21, all claimed limitations are set forth and rejected as per discussion for claim 9.

Conclusion

[7]   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Contact Information

[8]   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mr. Sath V. Perungavoor whose telephone number is (571) 272-7455. The examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Bhavesh Mehta whose telephone number is (571) 272-7453, can be reached on Monday to Friday from 9:00am to 5:00pm. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sath V. Perungavoor
Art Unit 2625
April 21, 2005

MEHRDAD DASTOURI
PRIMARY EXAMINER